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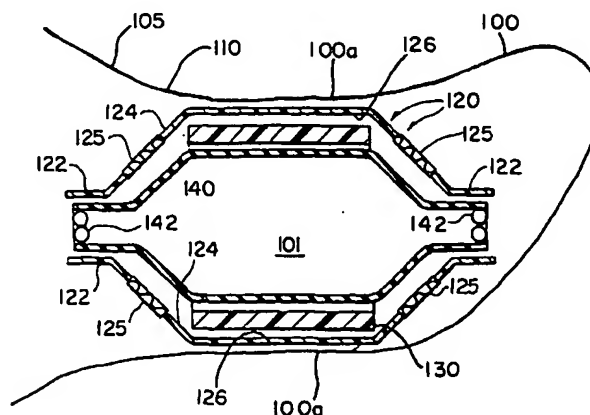
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**Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

[Continued on next page]

(54) Title: EXPANDABLE IMPLANT DEVICES FOR FILTERING BLOOD FLOW FROM ATRIAL APPENDAGES



(57) Abstract: Implant devices for filtering blood flowing through the ostium of an atrial appendage have component structures one or more of which are expandable. Devices with component structures in their unexpanded state have a compact size suitable for intra-cutaneous delivery to an atrial appendage situs. The expandable component structures are expanded in situ to deploy the devices. A device may have sufficiently short axial length so that most or almost all of the device length may fit within the ostium region. An expandable component structure in the device may include a blood-permeable filter element. The device may be deployed so that this component structure covers the ostium so as to direct the blood flow to pass through the filter element. The filter elements used in the devices may have hole size distributions selected to filter out harmful-size emboli. The filter elements may be embedded in elastic material so that hole-size distributions remain substantially unaffected by expansion of the device structures. Anchors attached to a component structure engage tissue surrounding the device and maintain the devices in position. The anchors may include inflatable anchors which engage interior walls of the atrial appendage.

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- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations*

**Published:**

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

**(88) Date of publication of the international search report:**  
29 August 2002

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 01/25920A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 A61F2/01

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 A61F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

WPI Data, EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 00 27292 A (MV MEDICAL DEVICES, INC.) 18 May 2000 (2000-05-18)  the whole document -----	1, 2, 5, 6, 18-20, 22-26, 33, 34, 36, 37, 40-42, 44, 45

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
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- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*A\* document member of the same patent family

Date of the actual completion of the international search

5 June 2002

Date of mailing of the international search report

21/06/2002

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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 01/25920

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 13-17, 21, 27-32, 38, 39, 48, 49  
because they relate to subject matter not required to be searched by this Authority, namely:  
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 01/25920

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0027292	A	18-05-2000	US 6152144 A 28-11-2000
			AU 1715300 A 29-05-2000
			CN 1342056 T 27-03-2002
			EP 1135068 A1 26-09-2001
			WO 0027292 A1 18-05-2000

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